Ejercicio de Areas

Determine le area del triangulo con vertices P1,P2,P3 donde $p1p2$ = u = (2i+3j-k) y p1p3 = v = (i+2j+2k.)

Solucion.

At = 1/2 ||(u x v)||

primero operamos (u $\times$ v)

```
sage] u=vector([2,3,-1])
```

```
sage] v=vector([1,2,2])
```

```
sage] x=u.cross_product(v)
```

tenemos que (u x v)

```
x
```

$(8, -5, 1)$

el area de triangulo = At = 1/2 ||(u x v)||

```
a=(1/2)*sqrt((x[0])^2+(x[1])^2+(x[2])^2)
```

```
a
```

$$\frac{3\sqrt{10}}{2}$$